

WHAT IS CLAIMED IS:

1. A combination of piston and piston ring, comprising:
a piston having a piston ring groove in which at least the piston ring groove is made of steel, said piston reciprocally moving in a cylinder bore;
a piston ring made of cast iron and fitted into the piston ring groove; and
a hard coat film formed to at least an outer peripheral sliding surface of the piston ring.
2. A combination of piston and piston ring according to claim 1, wherein said piston ring is made of one cast iron selected from the group consisting of flake graphite cast iron, spheroidal graphite cast iron, white cast iron, malleable cast iron, vermicular graphite cast iron and alloy cast iron.
3. A combination of piston and piston ring according to claim 1, wherein said piston ring has an elastic modulus ranging from 130000 to 170000 MPa.
4. A combination of piston and piston ring according to claim 1, wherein said hard coat film is an ion-plating film.
5. A combination of piston and piston ring according to claim 1, wherein said piston ring is subjected to a nitriding treatment.